

REMARKS

Claims 1 and 3-10 are currently pending in the present application. In light of the following remarks, further reconsideration on the merits is respectfully requested.

Rejection under 35 U.S.C. § 102(b) – Anticipation

Claims 1 and 3-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent Publication 2002/019355 to Hori et al. (hereinafter “Hori”). Applicants respectfully traverse.

The Examiner states that Hori discloses two catalyst - a first catalyst, which is solid and produced by method, including drying step (*See* paragraphs [0013] and [0021]); and a second catalyst, obtained by substantially the same method as claimed by Applicants without a drying step (*see* [0025] and [0026]).

Applicants respectfully disagree and submit that the Examiner’s position is based on a misunderstanding of the Hori reference. Specifically, it appears that the Examiner identifies the second catalyst of Hori based only on paragraphs [0025] and [0026], wherein the second catalyst is vaguely defined. However, Applicants submit that the Examiner has not fully considered Hori in its entirety, particularly paragraphs [0125] to [0158], wherein the second catalyst is described in detail.

The second catalyst defined in claims 11-21 of Hori comprises a titanium-containing solution obtained by dissolving a solid titanium compound in ethylene glycol. It appears that the solid titanium compound used for preparing the second catalyst is the first catalyst defined in claims 1-10 of Hori and is obtained by a method including a dehydro-drying step (*See* paragraphs [0136] to [0151], especially paragraphs [0137], [0141], [0142] and [0146]).

Additionally, Hori does not describe that a contact product of a hydrolyzate of a titanium halide or a hydrolyzate of a titanium alkoxide with a polyhydric alcohol may be used without dehydro-drying. In fact, all the catalysts in Hori Examples are prepared by a method including a dehydro-drying step.

In polyester production, addition of a large quantity of water is contraindicated because polyester is hydrolyzed. Therefore, it is necessary to dehydro-dry the contact product of the titanium-containing hydrolyzate with a polyhydric alcohol, because the titanium-containing hydrolyzate obtained by allowing a large excess of water to act on the titanium halide or the titanium alkoxide (*See* paragraph [0081]) has a high water content, even if solid-liquid separation is conducted.

Accordingly, Hori neither discloses nor suggests the same process for preparation of titanium-containing solution of the present invention. That is, the second catalyst of Hori is produced by a method including a dehydro-drying step.

Applicants submit that a condensation reaction, for example $\text{TiOH} + \text{HO-Ti} \rightarrow \text{Ti-O-Ti}$, is caused by dehydro-drying and, as a result, the polymeric solid titanium compound including more than 100 units is obtained in Hori. The titanium compound, of which the degree (n) was assumed to be 109 or higher, described in Comparative Example 11 of the present specification was also prepared in the same manner of Hori.

A requisite feature of the present invention is that the “*titanium is a monomeric or a polymeric titanium compound including not more than 100 units*”. (emphasis added) Titanium compounds used for preparing the titanium containing solution of the present invention were dissolved as they were without performing a drying step, which caused a dehydration-condensation (*See* Examples 1-4 and 15, etc.). Therefore, the degree of titanium compounds used in Examples of the present specification was not more than 100.

As is clear from the comparison between the Examples within the scope of the present invention and Comparative Example 11 of the present invention, the polymerization activity of polyester is improved by using a titanium compound including not more than 100 units.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Since Hori does not disclose a monomeric or a polymeric titanium compound including not more than 100 units for the preparation of the titanium containing solution, Hori cannot properly anticipate the presently claimed invention, within the meaning of 35 U.S.C. § 102(b). Accordingly, the present invention is patentable over Hori. Reconsideration and withdrawal of the outstanding rejection are respectfully requested.

In view of the foregoing, Applicants believe the pending application is in condition for allowance. A Notice of Allowance is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Monique T. Cole, Reg. No. 60,154 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

MTC

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